



# ENGINE MAINTENANCE RECORDS

**Aircraft Registration** 5874C  
**Engine Position** Right  
**Engine Serial No.** 604593



## ENGINE MAINTENANCE RECORDS

Log No. 1

Aircraft Registration No. N5874C (421C-0882)

Engine Manufacturer CONTINENTAL

Model QTSIO-520-L

Serial No. 604593

Date installed on aircraft \_\_\_\_\_

Time Between Overhauls (TBO) \_\_\_\_\_ Hours

If used on multi-engine aircraft:

Right     Left

Waco Regional Airport • P.O. Box 5219 • Waco, Texas 76708

254/752-8381

FAX 254-752-3307

1-800-445-9713

DATE "	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
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Date	Total Time In Service	Total Time Since Overhaul	Recording Meter Time
11-19-14	2185.1	0	



CONTINENTAL GTSIO-520-L Right Engine S/N 604593

Above referenced engine overhauled to new parts limits per FAR 43.2(a)(1)(2) to conform w/CMI SM X-30045. Applicable AD's and Service Bulletins c/w at this time. All gears cleaned, polished when required, inspected, magnafluxed, and no cracks found. Finish and dimensional limits within RAM Gear Inspection Specification No. 1818, Rev.L, dated 12-26-2013. Above referenced engine modified per STC SE8338SW-D. Installed new RAM camshaft p/n 2621-1, s/n XGF13045 as direct PMA replacement of Continental camshaft. Installed lifters p/n 658088 intake, p/n 658077 exhaust. AD 10-11-04 n/a to lifter p/n installed. Installed overhauled VAR crankshaft p/n 653020, s/n N05HA226. Ultrasonic inspection c/w per MSB96-10A and due at next overhaul or when removed. CMI GTSIO-520 series engine crankshaft counterweights, p/n 652833-OH are repaired in accordance with FAA approved procedures per RAM Drawing 2618, Rev. B dated 10-21-05. Instructions for Continued Airworthiness: Remove p/n 652833-OH counterweights at next engine overhaul and replaced with new per TCM SB00-3A or later FAA approved revision, except if repaired by RAM Aircraft, Limited Partnership per latest FAA approved revision of RAM Drawing 2618. Contact RAM Aircraft, L.P. at 7505 Karl May Drive, Waco, TX 76708 or (254) 752-8381 for replacement parts or service difficulties. AD 99-19-01 n/a per crankshaft date of manufacture I/A/W TCM MSB99-6A. Engine assembled with new TCM heavy style crankcase p/n 656935-12, s/n R14JA205. Installed new nickel ECI cylinders. Installed new RAM/FAA/PMA fuel nozzles p/n 2563-19A. TCM Service Bulletin SB06-1A n/a per installation of RAM fuel nozzles. Installed overhauled oil cooler p/n 8000464, s/n 3859159. Engine accessories exchanged for overhauled or new units with exception of tach generator, vacuum pump, prop governor, hydraulic pump and alternator which were not installed per this work order. Bendix magnetos installed. MSB94-8D on magneto timing procedure c/w per timing to data plate TC degree requirements with TDC locator and protractor with pointer. Installed rocker arms p/n 1654-1 and -2 (STC SE8338SW-D). Starter adapter shaftgear and crankshaft gear inspection, AD 2007-05-15 c/w per TCM Service Bulletin MSB94-4G Part 5 per installation of Service Kit EQ6642 with bushing p/n 654472. Damper backlash inspection per Part 2 due in 100 flight hours. Visual inspection of crankshaft gear and starter adapter shaftgear due per Part 3 in 400 flight hours. Category 1 thru 3 TCM Service Bulletin Compliance Listing in RAM Manual. Relocated turbo oil supply line per RAM Dwg. No. 1224, Rev H, dated 11-18-03 per STC SE8338SW-D. AD 87-04-05 n/a per engine model. Installed RAM/FAA/PMA spring loaded induction clamps p/n 1170-1. Installed RAM-FAA-PMA rocker box cover gaskets p/n 1366-1. Engine ground run on test stand per RAM Specifications for 4 hours. Engine run-in with Phillips 20W-50 Type M mineral oil. See RAM Recommended Oil Grade Maintenance Tip MT-1 for recommended oils. Engine approved for return to service for the work performed. Engine preserved per Service Bulletin SIL99-1 temp. storage up to 90 days. Pertinent details on file under Project No. 7487.

RAM Aircraft, Limited Partnership, P.O. Box 5219, Waco, Texas 76708 CRS VA1R551K


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12-11-14 Hobbs 3828.6 N5874C RH

A/C TT 5088.6

Remove engine due to case crack. Install RAM GTSIO 520 Ls/n 604593 on RH position. Replace all lord mounts with new. Install all fuel and oil hoses with new assemblies. Replace turbo, fuel control, waste gate actuator, turbo waste gate controller, throttle body and pop-off valve with units provided by RAM Aircraft. Replace all vacuum and crankcase vent hoses with MIL 6000. Clean all wiring and wrap with fusion tape to protect against heat. Replace exhaust Y pipe with Overhauled unit, see enclosed documents. Replace # 1 CHT probe adapter with new. Replace tail pipe clamp with new. Serviced oil system with Phillips 20w50 type M mineral oil. Pre-oil as per installation instructions. Engine ground run and fuel system set-up as per Continental SID- 97-F. All work performed IAW RAM Aircraft installation instructions and Cessna 421C maintenance manual. All found to be satisfactory for service.

James M. Chrestensen III  
AP 3507385

01-07-15 Hobbs 3850.9 N5874C

Change oil and filter, refill with 20W50 Phillips 66 oil. Aircraft ground run and found to be satisfactory for service.

James M. Chrestensen III  
AP3507385

02-03-15 N5874C Hobbs 3879 RH

Check oil filter ok, change oil and filter, refill with Phillips XC 20w50. Aircraft ground run ok. All found to be satisfactory for service.

James M. Chrestensen III  
AP 3507385

DATE	Hobbs			
2/20/15	3896.3			Alternator Removed and Replaced

02-20-15 Hobbs 3896.3 N5874C

Replace defective alternator with p/n 649304 s/n 007CA154. Aircraft ground run ok. All found to be satisfactory for service.

James M. Chrestensen III  
AP 3507385

06-29-15 N5874C Hobbs 3930 RH

Check oil filter ok, change oil and filter, refill with Phillips XC 20w50 and 2 cans Avblend. Aircraft ground run ok. All found to be satisfactory for service.

James M. Chrestensen III  
AP 3507385

**RT ENGINE**

DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
				<b>TOTALS</b> brought forward from previous page

Date	Total Time In Service	Total Time Since Overhaul	Recording Meter Time
07/21/15	2290.7	105.6	3934.2



RAM Aircraft, Limited Partnership • Waco Regional Airport

TCM GTSIO-520-L Right Engine S/N 604593

On above referenced engine adjusted pump pressure, idle, mixture, fuel flow and max RPM per Continental SID97-3F. Installed overhauled hydraulic pump S/N 224. Engine ground run power test good. All engine systems checked for leaks. Test flight for proper operation satisfactory. Engine approved for return to service for the work performed. Pertinent details are on file under Project No. 7765.

*Stephen Wade*

RAM Aircraft, Limited Partnership, P.O. Box 5219, Waco, Texas 76708 CRS VA1R551K

**08-14-15 N5874C Hobbs 3928.6**

Replace defective waste gate controller with p/n 470836-9003 s/n AK0114 and perform set up as per AMM. See enclosed 8130-3 documents. Replace defective oil cooler with p/n 8000464 s/n 3859576 as per AMM. See enclosed 8130-3 documents. Aircraft ground run and found to be satisfactory for service.

James M. Chrestensen III  
AP 3507385

*James M. Chrestensen III*

Madison Air Center, 7450 Old Canton Rd., Madison, MS, 39110 (601) 853-9358

Right Engine Maintenance Entry N5874C September 14, 2015  
TCM GTSIO-520-L S/N: ~~272425-R~~ 604593 Hour: 3952.8 TTE: ~~3798.6~~ 2309.3 TSO: ~~6114~~ 124,200

Maintenance Actions

- 1) Performed 100 hr/annual inspection/maintenance using Cessna 421C Maintenance Manual Inspection Checklist.
- 2) Performed Differential Compression Check. 1) 74/80, 2) 74/80, 3) 76/80, 4) 78/80, 5) 74/80, 6) 74/80.
- 3) Drained engine oil. Inspected oil filter, no metal noted. Installed a new CH48111-1 filter and saftied. Serviced with 11 qts Phillips X/C 20W50.
- 4) Both magnetos were removed. The points were set to .016" and cam adjusted for 15 degree e-gap. The magnetos were reinstalled and timed to 24 degrees before top dead center

Performed ground run and operational checks. No defects noted at this time. This engine has been inspected in conjunction with an annual inspection and is approved for return to service.

*Charles R. Hopper*  
Charles R. Hopper  
AP/IA 3564582

DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
				<b>TOTALS</b> brought forward from previous page
				12-02-15 N5874C Hobbs 4003.9 RH
				Check oil filter ok, change oil and filter, refill with Phillips XC 20w50 and Cam Guard. Aircraft ground run ok. All found to be satisfactory for service.
				James M. Chrestensen III AP 3507385
				<i>James M. Chrestensen III</i>
2/13/16	2408.5	223.4	4054.0	Checked oil filter ok, change oil and filter, refill w/ Phillips XC 20W50 (12gts) and 1 pint CamGuard. Aircraft ground run ok. All found satisfactory for return to service
				Joseph D. FABIAN ATP 2858458
				<i>Joseph D. Fabian</i>



7929 Karl May Dr.  
Waco, Texas 76708  
CRS No. AK6R541N

Engine TT: 2457.7  
 Engine SMOH: 272.6 (11/14)  
 Prop SMOH: 999.5 (08/10)  
 Hour Meter: 4101.2  
 Date: 10/10/2016

Continental GTSIO-520-L S/N R-604593

On above referenced engine, removed all cowling for 100 Hour/Annual Inspection. Installed new spark plugs. Drained oil, installed new oil filter and refilled engine with Phillips XC 20W-50 oil. Checked magneto timing. Inspected plug harness and all engine electrical. Checked all engine controls for movement and attach points. Inspected intake and exhaust system, condition and integrity of all engine accessories. Inspected engine mount, all baffles, and cowling. Inspected prop, spinner, and bulkhead. Inspected all fuel, oil, and hydraulic lines and fittings. Ran compression check and readings were: #1) 78/80, #2) 78/80, #3) 76/80, #4) 74/80, #5) 74/80, and #6) 78/80. installed new alternator ground cable. C/W A.D. 2000-01-16 per paragraph (b), (c), (d), (e) and (g) re-certification of exhaust system with exception of wye collector which was P/C/W 12/2014. (Paragraph (g) next due at 12/2026 for wye collector and 10/2028 for remaining exhaust.) (Paragraph (b) next due at 4151.2 HM.) Repaired tach generator heat shield. Repaired outboard forward baffle. C/W A.D. 2007-05-15 per part (2) 100 hour inspection requirements (Next due at 4201.2 HM). Readings were: 1) .038, 2) .040, 3) .038, 4) .038. (Next due at 4201.2 HM.) Installed new induction air filter per A.D. 84-26-02. (Next due at 4401.2 HM.) Installed overhauled vacuum pump, P/N 441CC, S/N 0BBX06. (See tag.) Repaired turbo heat shields. Installed new latch assembly for air box. Performed set-up of systems per service manual. All A.D.'s researched through bi-weekly 2016-19. See A.D. listing for all current and future compliance times. Above work done in accordance with Continental and Cessna Service Manual and Air Impressions, Inc. 100 Hour/Annual Inspection Checklist. Engine ground run-up leak checked good and approved for return to service. Pertinent details are on file under work order 4222.

*Joseph D. Fabian*  
 Air Impressions, Inc.  
 CRS# AK6R541N


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DATE

—  
RMING WORK



**AIR IMPRESSIONS, INC.**  
PROFESSIONAL AIRCRAFT SERVICE

7929 Karl May Dr.  
Waco, Texas 76708  
CRS No. AK6R541N

I certify this Engine has been inspected in accordance with a 100 HR. Inspection and has been determined to be in an airworthy condition.

DATE 10/10/2016 HM 4101.2

ENGINE TT 2457.7

ENGINE SMOH 272.6(11/2014)

WORK ORDER #A122

SIGNED [Signature]  
AIR IMPRESSIONS, INC  
REPAIR STATION # AK6R541N

06-14-17 N5874C Hobbs 4159.1 RH

Check oil filter ok, change oil and filter, refill with Phillips XC 20w50 and Cam Guard. Aircraft ground run ok. All found to be satisfactory for service.

James M. Chrestensen III  
AP 3507385

[Signature]

12-15-17 Hobbs 4171.8 TSMOH 508.7 RH N5874C

Annual Inspection Completed: Check oil filter ok. Change oil and filter and refill with Phillips XC 20W50 and 2 cans Avblend. Perform diff. comp. (1)58/80(2)78/80(3)62/80(4)70/80(5)71/80(6)72/80. Inspect and adjust L&R magnetos to spec. Inspect fuel strainers and clear vents. Clean fuel nozzles, clean and gap spark plugs. Inspect induction air filter. Inspect inlet and exhaust systems ok. Lube waste gate with Mouse Milk. Aircraft ground run ok. All work performed IAW Cessna 421C maintenance schedule in service manual.

I Certify that this Engine has been inspected in accordance with an Annual Inspection and was determined to be in airworthy condition.

James M. Chrestensen III  
AP 3507385 IA

[Signature]



**AIR IMPRESSIONS, INC.**  
PROFESSIONAL AIRCRAFT SERVICE

7929 Karl May Dr.  
Waco, Texas 76708  
CRS No. AK6R541N

Aircraft HM: 4226.1  
Date: 03/13/2018

Continental GTSIO-520-L S/N R-604593

On above referenced engine, performed set-up of systems per service manual specs. Engine ground run: up leak checked good and approved for return to service. Pertinent details are on file under work order 4650.

[Signature]  
Air Impressions, Inc.  
CRS# AK6R541N


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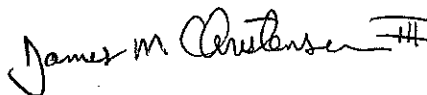
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DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
				<b>TOTALS</b> brought forward from previous page

03-05-18 N5874C Hobbs 4220.5 RH

Check oil filter ok, change oil and filter, refill with Phillips XC 20w50 and Cam Guard. Aircraft ground run ok. All found to be satisfactory for service.

James M. Chrestensen III  
AP 3507385



Madison Air Center, 7450 Old Canton Rd., Madison, MS, 39110 (601) 853-9358

Right Engine Maintenance Entry N5874C January 16, 2019  
TCM GTSIO-520-L S/N: 272425-R Hour: 4260.9 TTE: 4106.7 TSU: 432.3

**Maintenance Actions**

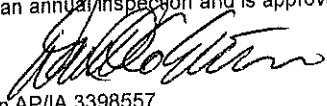
- 1) Performed 100 hr/annual inspection/maintenance using Cessna 421C Maintenance Manual Inspection Checklist.
- 2) Performed Differential Compression Check. 1) 74/80, 2) 74/80, 3) 76/80, 4) 78/80, 5) 74/80, 6) 74/80.
- 3) Drained engine oil. Inspected oil filter, no metal noted. Installed a new CH48111-1 filter and saftied. Serviced with 11 qts Phillips X/C 20W50.
- 4) Complied with inspection under (j) (k) /MSB94-4G part 3, starter adapter removal and inspection.

**Airworthiness Directives**

- 1) Complied with AD 2007-05-15 amendment 39-14976. Paragraph (f) needle bearing replacement has been previously complied with. The adapter was installed from overhaul at HM 3828.6. It was inspected in accordance with (h)(i)/MSB94-4G part 2, no defects noted. The next inspection under this part is due at HM 4360.9 or at annual, whichever occurs first. Complied with inspection under (j) (k) /MSB94-4G part 3, adapter removal and inspection. Next due at HM 4660.9. Starter adapter shall be inspected in accordance paragraph (g) should engine experience rough running.

Performed ground run and operational checks. No defects noted at this time. This engine has been inspected in conjunction with an annual inspection and is approved for return to service.

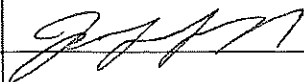
David C. Entekin AP/IA 3398557



12-4-18

4326.1

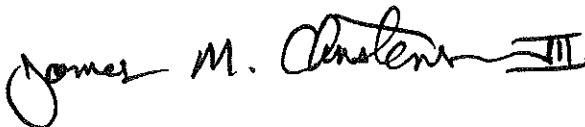
check oil filter, change oil and filter, refill w/Phillips xc 20w50 and Cam Guard. Champion filters 48111-1. Ground Run ok. Satisfactory for return to service. Joseph D. FABIAN ATP 2858458



12-05-19 N5874C Hobbs 4326.3

Remove RH #6 push rod tubes and reseal. Aircraft ground run and no leaks noted. All found to be satisfactory for service.

James M. Chrestensen III  
AP 3507385





Right Engine Maintenance Entry N5874C March 11, 2020  
TCM GTSIO-520-L S/N: 272425-R Hour: 4343.7 TTE: 4189.5 TSO: 515.3

DATE

**Maintenance Actions**

- 1) Performed 100 hr/annual inspection/maintenance using Cessna 421C Maintenance Manual Inspection Checklist.
- 2) Performed Differential Compression Check. 1) 70/80, 2) 64/80, 3) 65/80, 4) 62/80, 5) 66/80, 6) 69/80.
- 3) Removed and inspected oil filter, no metal noted. Installed a new CH48111-1 filter and saftied. Serviced with 11 qts Phillips X/C 20W50.
- 4) Starter adapter was inspected in accordance with (h)(l)/MSB94-4G part 2, no defects noted.

Work accomplished by: Charles R. Hopper, David C. Entekin and Lawrence D. Zavoina.

**Airworthiness Directives**

- 1) Complied with AD 2007-05-15 amendment 39-14976. Paragraph (f) needle bearing replacement has been previously complied with. The adapter was installed from overhaul at HM 3828.6. It was inspected in accordance with (h)(l)/MSB94-4G part 2, no defects noted. The next inspection under this part is due at HM 4443.7 or at annual, whichever occurs first. Inspection under (j) (k) /MSB94-4G part 3, adapter removal and inspection. Next due at HM 4660.9. Starter adapter shall be inspected in accordance paragraph (g) should engine experience rough running.

Performed ground run and operational checks. No defects noted at this time. This engine has been inspected in conjunction with an annual inspection and is approved for return to service.

*Lawrence D. Zavoina*  
Lawrence D. Zavoina

AP/IA 250965638



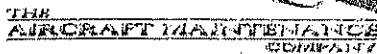
7929 Karl May Dr.  
Waco, Texas 76708  
CRS No. AK6R541N

**Continental GTSIO-520-L S/N L-272324-R**

Aircraft HM: 4366.3  
Date: 07/16/2020

On above referenced engine, performed set-up of systems per Continental and RAM specs. Engine ground run-up leak checked good and approved for return to service for maintenance performed. Pertinent details are on file under work order 5087.

*Justin Nicholson*  
Air Impressions, Inc.  
CRS# AK6R541N



ENGINE #2 LOGBOOK ENTRY 11/20/2020  
N5874C S/N: 421C0882 HOBBS: 4380.5

1. Complied with AD 2001-01-16 (b), no discrepancies noted at this time
2. Complied with oil and filter change IAW AMM 12-00. Cut open filter, inspected for metal, none found at this time. Serviced engine with 12 qts of Phillips XC 20w50 and installed new oil filter (PN AA48111). Leak check good.
3. Removed Prop governor for overhaul, installed newly overhauled prop governor (PN DCFS290D9D/T6 SN 000199). Runs and leak check good.

Justin Nicholson A&P 4053173

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